Research and Planning Division

Frequently Asked Questions

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Enterprise Research Program

The Enterprise Research Program is designed to arm the Human Resources staff throughout state government with the latest in scientific and best-practice information to facilitate more effective strategic thinking and ensure the State of Tennessee leads the nation in leveraging scientific research as a means of improving organizational performance. To this end, the Research and Planning division will, on request, conduct literature reviews and best-practice research studies to develop recommendations and provide white papers on a variety of Human Resources and employee lifecycle subjects.

What kind of research can Research and Planning conduct?

- The Research and Planning division can conduct research into best practices for human resources management, including but not limited to:
    - Organizational Design
    - Selection and Recruitment
    - Employee Retention
    - Performance Management
    - Coaching and Consultation
    - Metrics and Performance Assessment
- The Research and Planning division can also conduct meta-analyses, experimental and quasi-experimental hypothesis testing, and correlational research as requested *(see the glossary at the end of this document for definitions of these terms)*.

How do I request a research or best practice study?

- Please contact Korry Rahn via email (Korry.P.Rahn@tn.gov) or telephone 615-770-1188. When you call, please be ready to explain, in detail, why are you requesting a study. We will need this information to ensure we develop the most effective plan for successfully assisting you.

When I request a research or best practice study from Research and Planning, how long will it take?

- Please allow a minimum of 20 business days from the date of the request.

Enterprise Data Analysis Program

The primary purpose of the Research and Planning division of DOHR is providing research results and data driven recommendations for all departments, boards, and commissions on how to improve employee onboarding, engagement, and retention. The Enterprise Data Analysis Program is designed to facilitate the collection, analysis, and reporting which drives these recommendations.

What kind of information can Research and Planning Division provide?

- Our current focus is the creation of enterprise-wide data collection systems which ensure inter-comparability of results through standardization of factor structures and repeatable sampling methods. Statewide Data Collection, Analysis, and Reporting are based on the following standardized statewide data collection instruments:
    - Climate Survey
    - Onboarding Survey *(in development)*
    - Engagement Survey *(in development)*
    - Employee Outreach Program Site Visits *(in development)*
    - Exit Survey *(in development)*
- Single-agency data collection, analysis, and reporting *(available on request)* using the standardized statewide data collection instruments
- Ad-Hoc requests for the retrieval of statewide data that is otherwise unavailable using current production queries and reporting.

What kind of information can Research and Planning Division provide?

- Our on-site statistical analysis professionals can conduct a variety of quantitative and qualitative data analyses, including but not limited to *(see the glossary at the end of this document for definitions of these terms)*:
    - Correlations
    - t-tests and z-tests
    - Analysis of variance
    - Simple and multiple regression
    - Factor analysis
    - Non-parametric statistical tests
    - Phenomenological qualitative reporting
    - Root-Cause Analysis

- This information is intended for use by agency leadership, in conjunction with their Human Resources team, to inform decision making on topics including:
    - Organizational design
    - Employee selection
    - Employee retention
    - Employee engagement
    - Employee satisfaction
    - Developing work-life balance
    - Workforce planning
    - Talent management
    - Policy development

What information does Research and Planning need to conduct an analysis?

- The more information you are able to provide on why you are requesting an analysis, the better. Understanding the reasons behind an analysis request will help our team develop the most effective and efficient research and analysis methodology for generating the outputs you need.
- ***Please note that you will be responsible for pulling and gathering all relevant data available to you which will be used in the analysis.*** Research and Planning staff will assist you with identifying and developing a collection strategy for data which is unavailable to you, and will provide data which is collected using our standardized statewide data collection instruments.

How do I retrieve data from Edison with queries/reports to send to Research and Planning for use in analyses?

- Benefits Administration has created an excellent tutorial with screenshots on how to run Edison Queries. While the tutorials are focused on pulling benefits queries, the procedure is identical for all queries in the Edison system. This tutorial can be found at http://www.tn.gov/finance/ins/pdf/abc_edison_query_manual.pdf.

How do I find out what data is available to me in Edison before I contact Research and Planning for assistance?

- Our division maintains a listing of available production queries on the DOHR website (http://www.tn.gov/assets/entities/hr/attachments/Edison_Queries_and_Reports.xlsx).

Available queries are sorted by type, with each tab including all queries of a given type (for example, Time and Labor, Benefits Administration, Human Resources). This listing is updated monthly.

- If you are unable to find an appropriate query, Edison has a number of meta-queries that can be run to show what queries are currently available in production real-time. Please be sure to run the appropriate meta-query BEFORE requesting the development of a new query. The names for these meta-queries include:
    - TN_HR01_HR_QUERY_LIST
    - TN_BA_AGENCY_QUERY_LIST
    - TN_TL99_AM_QUERY_LISTING
    - TN_TL99_QUERY_LISTINGS

Who do I contact to obtain an Edison query/report that I cannot find in the system, request a new query or if I have a general question about retrieving Edison data?

- Our division maintains a listing of available production queries on the DOHR website. Available queries are sorted by type, with each tab including all queries of a given type (for example, Time and Labor, Benefits Administration, Human Resources). This listing is updated monthly.
- If you are unable to find an appropriate query, Edison has a number of meta-queries that can be run to show what queries are currently available in production real-time. Please be sure to run the appropriate meta-query BEFORE requesting the development of a new query. The names for these meta-queries include:
    - TN_HR01_HR_QUERY_LIST
    - TN_BA_AGENCY_QUERY_LIST
    - TN_TL99_AM_QUERY_LISTING
    - TN_TL99_QUERY_LISTINGS
- If, after consulting the list and trying the queries that seem appropriate, you are still unable to find the information you need, please contact Korry Rahn via email (Korry.P.Rahn@tn.gov) or telephone 615-770-1188. When you call, please be ready to answer the following questions:
    - Why do you need the information you are requesting?
    - How will you use the information you are requesting?
    - Which queries and/or reports you have already run?
    - What other information have you have obtained from other sources that you will combine with the information you are requesting from us?

I'm having trouble running a query in Edison. Who do I contact for help?

- Benefits Administration has created an excellent tutorial with screenshots on how to run Edison Queries. While the tutorials are focused on pulling benefits queries, the procedure is identical for all queries in the Edison system. This tutorial can be found at http://www.tn.gov/finance/ins/pdf/abc_edison_query_manual.pdf.
- If, after reviewing the tutorial and trying again, you are still unable to run your query, please contact Korry Rahn via email (Korry.P.Rahn@tn.gov) or telephone 615-770-1188. When you call, please be ready to answer the following questions:
    - Which queries and/or reports are you attempting to run?
    - Why do you need the information you are requesting?
    - How will you use the information you are requesting?
    - Which queries and/or reports you have already run?
    - What other information have you have obtained from other sources that you will combine with the information you are requesting from us?

When I request data analyses from Research and Planning, how long will it take?

- Please allow a minimum of 10 business days from the date of the request.

Enterprise Employee Outreach Program

In order to establish a more complete picture of the employment experience within state government, the Research and Planning division of DOHR is creating a team of Research Specialists who will be available to conduct site visits with each agency. The Enterprise Employee Outreach Program is designed to facilitate the collection, analysis, and reporting of qualitative data as a supplement to the quantitative data collected through the Enterprise Data Analysis Program.

When does Research and Planning conduct site visits?

- Site visits should be conducted when:
    - An agency HRO has made an analysis request and, while working with Research and Planning staff to identify and develop a data collection strategy, has determined that a site visit to collect additional qualitative data is appropriate.
    - An agency HRO has identified an issue within their agency (for example, high turnover among employees in a given location), and would like to gather qualitative data to guide decisions and future analysis recommendations on how to address the issue.
- **Please note that all site visits will be coordinated through the agency HRO. No site visits will be conducted without the HRO's involvement and consent.** Site visits will be scheduled and conducted at the agency's request. Once the program is established, agency site visits will be conducted on a semi-annual basis with participating agencies.

How do I request a site visit?

- Please contact Korry Rahn via email (Korry.P.Rahn@tn.gov) or telephone 615-770-1188. When you call, please be ready to explain, in detail, why are you requesting a site visit. We will need this information to ensure we develop the most effective plan for successfully assisting you.

How long does a site visit take?

- Most site visits will last from 3-10 business days, depending on the size of the agency, the location of the site, and the information collection system that will be used during the visit. Please allow 3-5 business days to schedule the visit, and 15 business days from the end of the site visit for data analysis and report generation.

Who from my agency should participate in a site visit?

- Participant selection will depend on what data collection tools are being used. Your assigned Research Specialist will determine what data collection tools are most appropriate and assist you with identifying appropriate participants.

What can I expect from a site visit?

- Site visits provide an opportunity for the agency and Department of Human Resources to work together to identify issues and develop action plans to address them. The exact nature of a site visit will vary depending on the circumstances, but most will include:
    - One or more initial planning meetings to determine timeframes and to plan interviews and/or focus groups
    - The actual site visit(s)
    - An analysis and output development period
    - One or more post-visit planning meetings to develop the report-out and action plan recommendations
    - A final report-out

What kinds of information can I expect to receive after a site visit has been conducted?

- Since site visits focus on the collection of qualitative data, they can result in:
    - The identification of possible issues that warrant further investigation
    - The development of theory that can be tested using quantitative research tools
    - The validation of existing quantitative data

When can I expect the results of the site visit?

- Please allow a minimum of 15 business days from the final date of the site visit.

Glossary

Analysis of variance (ANOVA): A statistical technique used to test the equality of three or more sample means and thus make inferences as to whether the samples come from populations having the same mean

Correlation: The technique whereby two or more variables are systematically measured and the relationship between them (i.e., how much one can be predicted from the other) is assessed

Dependent variable: The variable a researcher measures to see if it is influenced by the independent variable; the researcher hypothesizes that the dependent variable will depend on the level of the independent variable; research outcome, or the consequence in a causal relationship

Factor analysis: A statistical method used to describe variability among observed, correlated variables in terms of a potentially lower number of unobserved variables called *factors*

Hypothesis: An expected relationship between an independent and a dependent variable

Independent variable: The variable a researcher changes or varies to see if it has an effect on some other variable

Instrument: A measuring device used to gauge the level, position, speed, etc., of something. In psychological assessment, instruments can include surveys, tests, focus groups, and interviews. These are used to measure different psychological constructs, like engagement, satisfaction, and culture.

Literature review: An evaluative report of information found in the literature related to your selected area of study. The review should describe, summarize, evaluate and clarify this literature. It should give a theoretical base for the research and help the author determine the nature of your research. Note that literature reviews are secondary sources and do not report new or original experimental work.

Meta-analysis: A statistical technique that averages the results of two or more studies to see if the effect of an independent variable is reliable

Non-parametric statistical tests: Statistical techniques that do not make restrictive assumptions about the shape of a population distribution when performing a hypothesis test

Phenomenological research study: A study that attempts to understand people's perceptions, perspectives and understandings of a particular situation (or phenomenon). A phenomenological research study tries to answer the question 'What is it like to experience

such and such?' By looking at multiple perspectives of the same situation, a researcher can start to make some generalizations of what something is like as an experience from the 'insider's' perspective.

Probability: The chance that something will happen

Query: A request for information from a database. There are three general methods for posing queries:

- Choosing parameters from a menu
- Specifying fields and values
- Writing in the database's special query language

Qualitative variables: Variables whose values are categorical rather than numerical (i.e. marital status, heads of tails in a coin toss, or winning or losing a basketball game)

Quantitative variables: Variables with numerical values resulting from measuring (i.e. height, IQ, speed) or counting (i.e. number of employees, phone calls per hour)

Regression: The name of the general statistical process of predicting one variable (i.e. height of children born to tall parents) from another (i.e. the height of the parent)

- **Simple regression**: The statistical process by which one variable is used to predict another

- **Multiple regression**: The statistical process by which several variables are used to predict another

Reliability: The consistency of measurement; the extent to which a variable is being measured without error (i.e. someone who throws darts and hits the same spot on a dartboard every time has reliable aim)

Statistical analysis: a collection of methods used to process large amounts of data and report overall trends. Statistical analysis is particularly useful when dealing with noisy data. Statistical analysis provides ways to objectively report on how unusual an event is based on comparative data.

***t*-test**: A statistical examination of two population means, most commonly used when testing differences between two groups. A two-sample t-test examines whether two samples are different and is commonly used when the variances of two normal distributions are unknown and when an experiment uses a small sample size.

Validity: In research, when a conclusion or inference is true. In employment, the Equal Employment Opportunity Commission defines validity as the demonstration of the job relatedness of an employment procedure. The EEOC recognizes three types of validity (though current best practices in research have identified more):

- **Criterion-related validity**: a statistical demonstration of a relationship between scores on an employment procedure and job performance of a sample of workers

- **Content validity**: a demonstration that the content of an employment procedure is representative of important aspects of performance on the job

- **Construct validity**: a demonstration that (a) an employment procedure measures a construct (something believed to be an underlying human trait or characteristic, such as honesty) and (b) the construct is important for successful job performance

***z*-test**: A statistical test used to determine whether two population means are different when the variances are known and the sample size is large. The test statistic is assumed to have a normal distribution and nuisance parameters such as standard deviation should be known in order for an accurate z-test to be performed.

Root-cause analysis: A collective term that describes a wide range of approaches, tools, and techniques used to uncover the underlying causes of problems.

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